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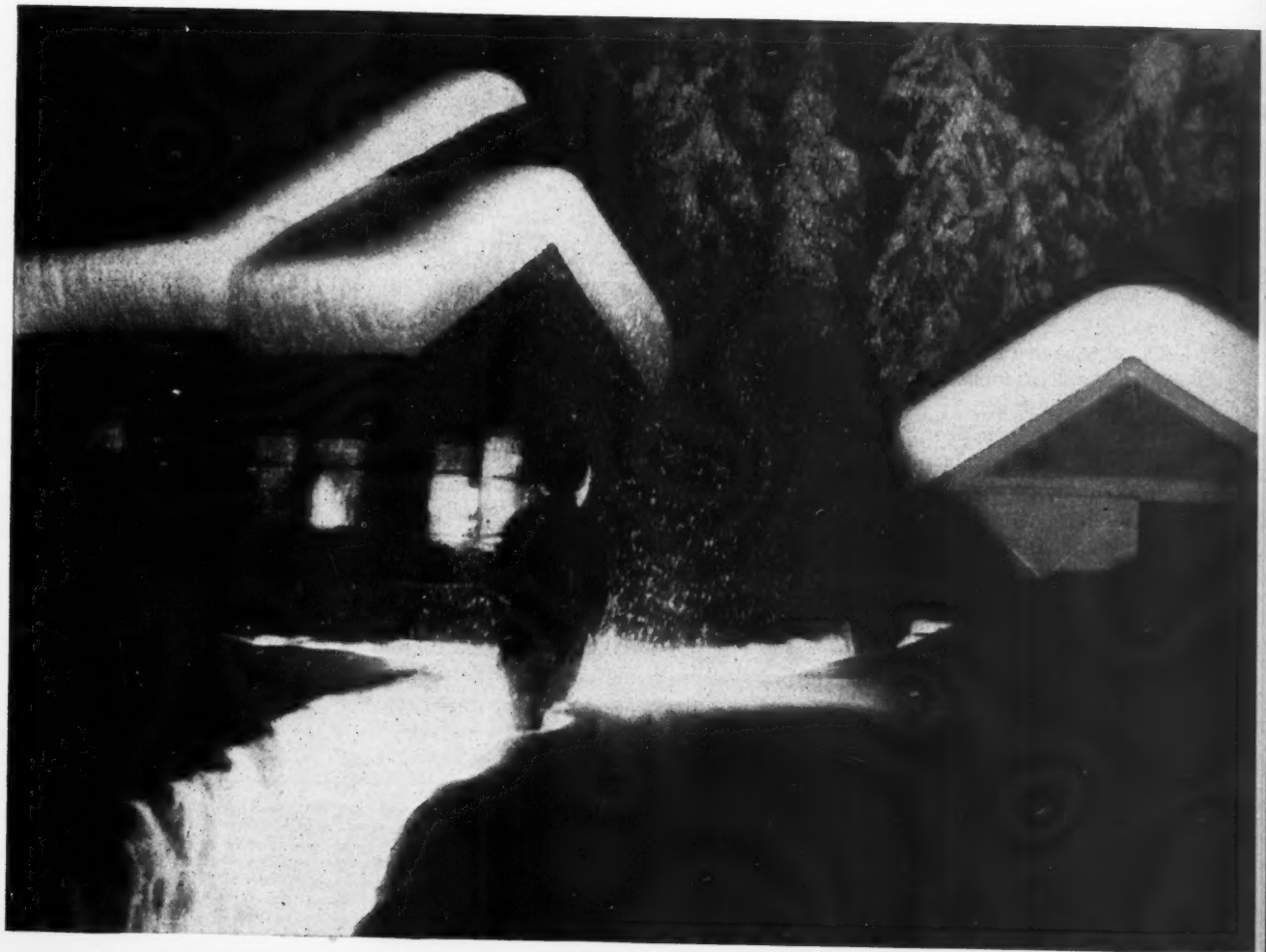
CG Consumers' guide



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ILLUSTRATIONS: *Cover, Forest Service; p. 3, drawing, Howard Chapman; p. 4, UNRRA; p. 5, Red Cross; p. 6, Consumers' Guide; p. 7, Food and Drug Administration; p. 8, Food and Drug Administration, bottom, OFAR and BPI; pp. 9, 10, Extension Service; p. 11, Extension Service, right, Knoxville News-Sentinel; pp. 12, 13, 14, pictographs, Consumers' Guide, charts, BAE; p. 15, UNRRA; p. 16, drawings, Katharine Johnson.*

On the air . . .

Out of the air and into millions of American homes pours, around the clock, a steady flow of words and music. Ten-thousand-dollar-a-week comedians crack their expensive jokes, soap opera heroines suffer, the world's great symphony orchestras spread their waves of lavish sound, crooners wail, the President speaks from his fireside, and the explosion of an atomic bomb is heard.

This vast flow of sound may originate in the plush metropolitan studios of the great national networks or in the studios of a rural 500-watt station. In all there are about 1,000 standard radio stations in this country.

The material that comes out of them and into the intimacy of millions of kitchens and living rooms makes a continuing impact upon the listeners. Because of the mechanical perfections of transmission and reception, and because of the improved techniques of presentation of material, the radio is easy to listen to. On account of this, radio becomes one of the greatest instruments of public education—education for old and young alike.

Its influence on the consuming public is terrific, and this influence is not confined to simply urging the buyer to purchase a certain commodity made by a certain firm. There is a steady flow of information which makes possible wiser buying, more economical and nutritious diets better homemaking, and better farming.

Education by radio may take many forms. Astonishing results are obtained in carrying out programs for public good and for the individual's more economic living by continued repetition of short spot announcements. For example, in the past months, millions of housewives have been told the reasons to save fat and so have done it. These short statements, just heard in passing, have their effect on preventing accidents, cutting down fire hazards, helping to sell bonds, and keeping housewives informed on plentiful foods.

Other programs go into more detail. Some are designed to teach by calling attention to a new method of better homemaking and telling the housewife who is interested where she can obtain bulletins or other directions which she can keep on hand for regular reference.

Still other types of programs attempt complete instructional courses. The New York Extension Service put on a series of programs called "Let's Make a Dress." In 15 radio scripts, each 15 minutes in length, listeners were encouraged to make a dress during this period of 7½ weeks. Mimeographed copies of sewing aids were sent to the women who enrolled. The homemakers listened to the broadcast and then, or very soon after, referred to her sewing aids and proceeded to make the next step of the dress. Fifteen thousand women made 15,000 dresses under this instruction.

The Radio Service of the Department of Agriculture is designed to bring the latest authentic information on better diets, better homemaking, food supplies on the market, and community improvements. This is done by supplying the information to radio stations in the form of scripts or flashes which are partially handled through State Extension Services They cooperate with national hookups and supply material for farm and homemaking programs, also with county agents and home demonstration agents in their use of radio at the local level.

The oldest uninterrupted radio project of the Department is Consumer Time which is in its 14th year as a network public service program. The show is presented each Saturday at 12:15 p. m. on the stations of the National Broadcasting Company. Its timely information is conveyed in lively semi-technical scripts prepared by U. S. Department of Agriculture and produced under the direction of NBC.

In the last few months, typical of its type of programs, it put on the air a number of shows related to agriculture and better living. During the canning season a dramatization was made of how one community organized a canning center which paid dividends in the form of more food canned better and in a shorter time.

The question, "When can I build a house?", was answered in another program with the guest speaker, Wilson Wyatt, the national housing expediter. Still another program emphasized National Farm Safety Week, and a free booklet on how to prevent accidents in the home was mailed on request to those who listened. The new school lunch bill was also explained in dramatic form, and the best use of fresh vegetables and the best buys in them were brought out in still another program.

Programs for this month include one on practical tips on make-overs from leather, fur, and felt; and there will be one on your Christmas tree, where it comes from, hints on the care and fireproofing of trees. You will hear, too, this month about the postwar Basic 7 and get some New Year resolutions for good nutrition.

The Department of Agriculture also cooperates and supplies material for parts of the National Farm and Home Hour programs as well as the American Farmer network show.

All of these programs make use of radio's great educational force. And the things you learn in these programs are always practical.

The Editor

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Along Hunger's Highway

•Late this last winter and early spring the full force of hunger that followed in the wake of war struck Europe. Vast areas were threatened by famine. The prior year's supplies were near exhaustion. The people had to wait for their harvest before food of their own could be had. During the previous summer, drought had hit great grain producing regions around the Mediterranean and Southern Europe. Transportation was broken down. Channels of trade were chaotic. Millions of dispossessed families marched over the countryside making a further demand upon the limited supplies of the region into which they came. Fertilizers, farm machinery, and seed were at a premium. So were draft animals and tools.

The surplus food producing nations of the world were called upon to ship food supplies that would halt the advance of famine. In order to help make these supplies available, we did not ration but everyone conserved by not wasting and by eating bread made from higher extraction flour.

With these supplies, millions of people were saved from outright starvation. With continuing shipments from abroad and the autumn's harvest in Europe to draw upon, the people now move into another precarious year.

How much did our supplies help them? What shape are they in now to carry through the winter and put in and harvest next season's crops?

Norris E. Dodd, Under Secretary of Agriculture, and American Delegate to the Food and Agriculture Organization, returned only a few weeks ago from the Copenhagen meeting of the Food and Agriculture Organization. While in Europe he visited nations that will again look to us for food, to obtain first-hand information about food production and food needs. He talked with officials and with the people on the streets. With the assistance of Army and Embassy officials in making arrangements, he traveled both by plane and by car. He saw conditions of people in the cities and villages and he saw the farms and the gardens.

These first-hand reports from cities and areas visited tell graphically the rise and fall of the tide of battle against starvation. It is a tide that moves across a backdrop of bombed cities, homeless people and broken channels of domestic and international trade. Here are flashes from his diary:

BREMEN AND HAMBURG, GERMANY: These ancient key ports of northern Europe are badly smashed by bombs, sunken ships lie in the water between piers, great empty shells of bombed warehouses line the docks. The people on the street and in food lines show the effects of undernourishment and strains of war.

The housing shortage is acute. When homes were bombed people moved in with others. The home of a British official in Hamburg, once the place of a wealthy German, had housed 40 families, now the owners of the home live in a loft over the garage.

Although warehouses were destroyed, piers and docks are usable and electric cranes are in operation unloading supplies from the United States.

In one of the heaviest bombed areas along the docks of Bremen there stands undisturbed, as if saved by magic, a modern flour mill. It is working 24 hours a day grinding both wheat and corn for distribution by the American occupation forces.

The rations in Hamburg for nonsuppliers of food is 1,137 calories a day. This includes certain vegetables produced from home gardens. Even here help has counted. At one time the ration was below 1,000 calories. It is shortly to be increased from 1,137 to 1,337 calories per person per day in the cities of 10,000 and above. Of the Hamburg ration about two-thirds is made up of bread and other cereals. Fats, oils, meats, and dairy products ration consists of hardly a fork full—1¾ ounces per person per week.

WEISBADEN AND STUTTGART, GERMANY: In these areas in the American zone the present ration is 1,000 calories per day per person. Here is a typical menu:

Breakfast: 1 slice black bread, ½ pat butter, 1 cup black ersatz coffee.

Lunch: 4 small potatoes, very small square meat (size of 2 pats of butter), 1 bowl flour soup.

Dinner: 1 slice black bread, ½ pat butter or cheese, 1 bowl cereal (no milk or sugar).

Here, as in the rest of American occupied German zones a ration and lodging card is necessary to get food. If a person changes his lodging for a night he must report to the ration office, get a new lodging card and get a new ration card. This necessary red tape often cuts down the traveler's meager diet. By the time he gets his lodging card there is no food left or shops are closed.

ROME, ITALY: In this area over which our armies fought, 35 percent of the farm buildings were destroyed, one-third of the livestock and 40 percent of the equipment. In some areas there is almost 100 percent destruction. The basic ration is 1,000 calories a day per person. But the only foods rationed are bread, fat, sugar, and cheese. Many can obtain the unrationed foods which brings the estimated average total calory intake to from 1,650 to 1,800 calories a day.

Prices are high. Living costs jumped 33 percent. A fettucinni course at an unrationed restaurant dinner costs as much as 4 to 5 days pay for the average worker. A whole dinner would cost a sum equal to a week's income of the average worker.

Everywhere Italian agriculture is looking up. Italy has the capacity to manufacture all the fertilizer it needs. It could supply nitrogen for export if enough electricity and coal were available; but drought has cut the production of electricity by water power and the breakdown of international trade makes it impossible to get enough coal from Germany, England, and Poland upon which she formerly depended for this fuel. She is dependent upon imports of rock phosphate from Africa and not enough has been shipped in to meet her needs.

Farm machinery production and supplies are better here than in most of the rest of Europe. Production of tractors, though small, is about up to prewar, but the area suitable for the use of tractors is small.

Italy was never self-sufficient in food. Italy will be able to get along with smaller grain imports than this year. Italy's food outlook for next year is better.

ATHENS, GREECE: Greece was hard hit. The basic calory ration per day was 600. With the addition of unrationed foods available, total calory intake probably averages about 1,500.

Transportation is disrupted. The North and South railway has been heavily damaged and will not be in operation for a long time. Only 5 percent of the roads are good. Thirty-five percent can be used. The other 60 percent are impossible for modern travel. During the war 50 percent of the draft animals were lost so a large part of the power in the fields is human power. Further importation of donkeys and small draft animals is needed. Tractors supplied by UNRRA helped this situation but areas where tractors can be used is a small part of the total. Cost of operation is high because cost of gasoline is high.

Greece is a mountainous country. Only 15 percent of the land can be cultivated. Size of farms averages 7 acres. On these farms about 35 percent of the homes were destroyed as a result of war. In some districts 100 percent.

One hundred and eighty-five thousand of the agriculture population was homeless. For these reasons much arable land was uncultivated.

Small grain production was good this year but drought hurt the corn crop. However, Greece normally imported one-third of cereal requirements.

VIENNA, AUSTRIA: The basic calory rate is 1,200 of rationed food a day since February. It is hoped to increase the ration to 1,550.

The population of Austria is about 7 million. Almost one-third of them live in Vienna and 85 percent of the population are nonsuppliers of food. Agriculture in Austria was exploited during 7 years of German occupation and the soil not properly cared for. There is a dearth of farm machinery. Nevertheless all of the land is reported planted despite the loss of horses and machinery and great need for fertilizer, tractors, and seed. The quality of the work is not so good due to the lack of agricultural workers.

PRAGUE, CZECHOSLOVAKIA: The food situation in Czechoslovakia is generally good. The present calory intake is estimated at 3,000 or more per person per day. This improved food situation is partly due to the fact that 15 percent of the population, mostly Sudeten Germans, 2 million out of 14 million people, is being expelled.

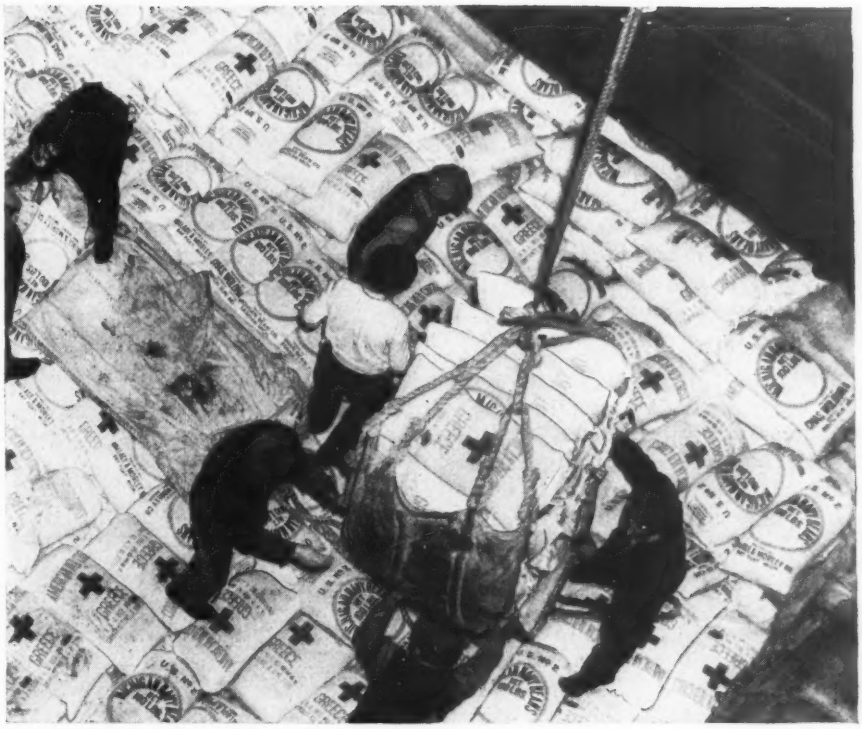
In fact, during July, Czechoslovakia exported 68,000 tons of potatoes and had surpluses of fruits and vegetables though there remains a real shortage of fats. The sugar-beet crop came through well this year with a high sugar content and some malt exported.

PARIS, FRANCE: The basic ration of France is 1,300 calories with an additional 900 calories of unrationed food and a total of 2,200 calories a day per person. This provides 300 grams of bread daily with 90 percent extraction. There is hope that this ration may be increased to 350 grams daily. This would help since 60 percent of the ration is bread. The fat ration was cut in August from 600 to 500 grams in order to have enough to run through until October.

Crop conditions on the whole are good in France but with acreages down. Some land was mined and people were evacuated from the Eastern areas. Production was handicapped too by the fact that the Germans took many tractors and other machines as well as much work stock.

France hopes to be back to prewar farm production level in another year or two.

ANTWERP, BELGIUM: The bread ration is 300 grams a day made from 85 percent extraction flour. They are now using 80 percent wheat and 20 percent rye or barley in the grinding but this is to be reduced to 90 percent wheat and 10 percent rye or barley. There is every indication that Belgium is recovering rapidly from the war situation but Belgium normally imports a large part of its grain supplies and will need grain again this year.



THE HAGUE, HOLLAND: In Holland people were getting 1,800 calories of rationed food plus 250 calories of unrationed food per day. The weekly ration provides 2,200 grams of bread, 200 grams of sugar, 2,000 grams of standardized milk, 100 of cheese, 3,000 of potatoes and 200 grams of meat.

There is an abundant supply of unrationed vegetables, a good supply of fruit and fish. While this ration is high compared to many of the other countries it is badly needed by the Dutch to build them up from the severe food shortage they suffered. During the last part of the occupation the ration got down to about 500 calories a day and during the 3 years of war the average diet was about 1,500 calories.

Production is coming back rapidly. Of the 55,000 square miles flooded during the invasion, 13,000 have been reclaimed. Work is going on to bring back the remainder of the area.

Poultry numbers 30 percent of prewar. Hogs 50 percent, and cattle 80 percent. The crop of vegetables was good, particularly tomatoes and cabbage, which were available for export in considerable quantities.

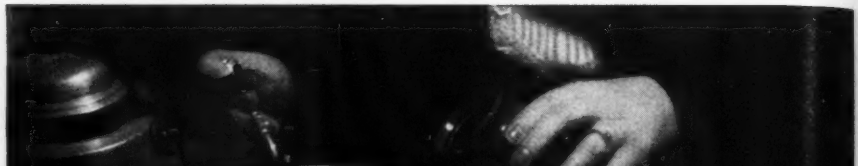
LONDON, ENGLAND: The food situation is tighter than during the war. Rations of bread and other food have been cut. The British stoically accept their slender supplies of meat and fat, and abundance of potatoes, brussels sprouts, and cabbage as an incident of recovery from their long war. Money that might be spent on the import of food is used to build up British industry and trade in order that they can more quickly bring their island back to a solid peacetime basis.

EUROPE: The European harvest plus the emergency food shipments from other countries obviously prevented widespread famine. However, when we compare their diets with our average of 3,350 calories per day, it's obvious they have a long way to go. Also when this year's harvest and the present supplies on hand are consumed, the continent will be faced with a food shortage which will become more acute as they approach the 1947 harvest.

The first efforts of rehabilitation made for some improvements in the food supply and headed off starvation in many of the more sorely pressed areas. Nevertheless, the people of Europe, on the average, must live through the winter on meager diets and face a curtailment of even these diets during the late winter and spring unless continued help from abroad comes in time.

It's taste that counts . . .

Tea has no food value except what we put into it in milk and sugar, but the taste and tang it adds to meals, the "pick-up" it gives us between times, makes it important. For full-flavor value, know what to look for when you buy, and proper way to prepare it.



A true tea lover measures leaves carefully into a warm porcelain teapot, adds freshly boiling water, allows the mixture to steep for 3 to 5 minutes before pouring.

● How many lumps, please? Milk or lemon? You take it "straight?" Then you're a connoisseur, perhaps even an epicure or a gourmet. Everyone to his taste, of course, and as the man said, it's a free country. There are no statistics to prove the statement, but it's a safe guess that the majority of Americans add something in the way of flavoring to their tea. But with or without, it's the basic brew that counts. It must have just the strength and aroma that you prefer, or so far as you're concerned it's a failure.

We'll have more tea this year than at anytime since war began. And there'll be more varieties. Green tea will be back, after its wartime absence. Not in prewar amounts, to be sure, but enough to bring cheer to its devotees.

Early in 1942 as a war measure, the Government ordered tea supplies to wholesalers limited to 50 percent of the amounts handled during the same periods of 1941. This year they are allowed about 85 percent of their prewar supply. Of this total—close to 90 million pounds—some will be green tea—the unfermented variety which makes a pale yellow drink with a distinctive, delicate savor. During the war imports of this type of tea, which comes principally from China and Japan, sank to zero. Now we expect to receive 7½ million pounds of it from Japan. Import licenses have been issued for 3 million pounds from China. Mere drops in the Nation's teapot, but eagerly sought by its addicts.

Green tea continued to be made in China during the war, but as a gesture of good will, most of the available supply went to North African Arabs. The Arab's religious code forbids them to drink fermented tea.

That word fermented seems odd in connection with tea. But it makes the great basic difference in teas. All the hundreds of varieties and blends fall into three main divisions: Green or unfermented, oolong or semifermented, and black or fermented tea. All three can be processed from the leaves of the same plant.

The tea plant, *Thea sinensis* L., is an evergreen that begins to bear at 3 or 4 years of age, and continues bearing for about 30 years. Left to itself it would grow to a sturdy bush 30 to 60 feet high. Tea planters, however, keep the bushes pruned down to 3 to 5 feet to simplify plucking the leaves. Tea grown on uplands is usually more desirable than that grown on lowlands. There are about 1,500 different growths and over 2,000 possible blends.

Plucking the leaves is an all-year-around occupation except in cold sections of Japan and China where the plants do not put out new leaves in winter. The way the leaves are plucked affects the quality of the tea. "Fine plucking" means picking only the bud and the two youngest leaves of the tea shoot. "Coarse plucking" includes shoots which are large—generally more than the 2-leaves-and-a-bud of the "fine plucking" —and dormant shoots. Native men and women pluck the leaves directly into bamboo baskets at their sides or slung over their shoulders. A tea plucker, using both hands, can pluck about 30,000 shoots a day. It takes approximately 3,200 shoots to make a pound of processed tea.

Processing Methods

After the leaves are gathered processing starts. Techniques differ, and some countries have more mechanized operations than others, but the process consists of four main steps: Drying or withering, rolling, fermenting, and firing.

For black tea, leaves are placed in the sun to wither until they lose some of their moisture. Rolling, either by hand or machine, then breaks down the leaf cells and exposes the juices to the air. It is during this rolling process that chemical changes start. Oxidation of the tannin begins and the essential oil which gives black tea its characteristic flavor is developed. Next the leaves are spread out on trays or a conveyor belt in a moist atmosphere for several hours for fermentation. To check further fermentation the leaves are "fired" in a hot dry room where they change to the familiar black tea. The tea is then ready to be graded and packed for shipment.

Oolong tea is made by much the same process as black, except that fermentation is stopped at an earlier stage, giving it some of the characteristics of both black and green tea.

Green tea is made from unwithered, unfermented leaves. They are steamed, rolled, and fired. Since it is the tannin re-

leased by fermentation that gives black tea its aroma, green varieties have very little. It is their distinctive flavor which is so highly prized by green tea enthusiasts.

Scented or flowered teas, of which jasmine is the most familiar, can be made from green, black, or oolong types. After firing, the leaves are spread in alternating layers with flowers and heated again. Before packing, the flowers are sifted out or left in the tea.

Orange Pekoe, contrary to popular belief, does not refer to either the variety or the place where the tea is grown. The words describe the size of leaf, and give no clue to quality. Pekoe and Orange Pekoe are black teas made from the first and second leaves of the tea shoots. The larger leaf teas are Pekoe, the smaller Orange Pekoe.

Consumer protection

Whatever the type or variety of tea they prefer, American tea drinkers can be sure it is clean, pure, and meets Government quality standards. In 1897 Congress passed the first tea law in protest against the adulterated and poor quality teas exporters were dumping on the United States. Under the terms of this law a board of tea experts, six from the trade plus the Supervising Tea Examiner of the Food and Drug Administration, meets every year to determine minimum standards for every type of tea to be imported into the United States that year.

Setting the standards

Since tea has no food value it is judged only on its flavor and aroma. The experts sit around a revolving table set with handless china cups, balances, metal weights, spoons, and a kettle of boiling water. As carefully as any apothecary they weigh exactly the right amount of tea on the balances and then shake it into a cup. Freshly boiling water is poured over it and allowed to steep for 2 to 3 minutes. Now the testing begins. First a sniff at a teaspoonful of the infused leaves. Next, a spoonful of the tea is sipped for flavor. Then the leaves are examined closely for pieces of stems and leaves. The sample is compared with last year's sample of the same variety. Finally a standard is decided upon. Samples of the standard teas for the year are then sent to the examiners at each of the ports through which tea comes into this country.

For some years now the Board has met only to determine whether standards should be changed. This year they decided that the standards established in 1942 are still in effect. Not sufficient change in varieties of imports was expected to make new standards necessary. The standards now in effect to which all teas of that particular type must measure up are:

JAVA for fully fermented teas of the East India type.

CHINA CONGOU for fully fermented teas of similar type.

CHINA GUNPOWDER for all unfermented (green) tea.

CANTON OOLONG for all semifermented tea.

SCENTED CANTON for all scented (or "flower") teas.

After the standard is set, all imports of that variety must meet it or be turned back. Tea goes direct from ships to bonded warehouses. There it stays until samples have been collected by the Food and Drug Administration and compared with the standard set by the Board.

The examiner's tests are much like the process of setting the standard, except that he does not depend solely on his sense of taste, smell and touch. If the proportion of dust is doubtful he makes scientific tests in the laboratory.

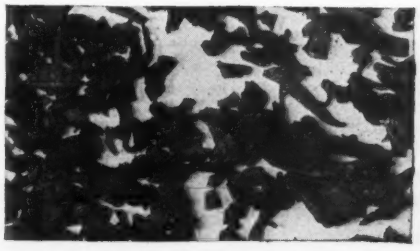
If it does not meet the standard set by the Board for its type it is not admitted to the United States. The tea importer may, however, appeal this decision to the United States Board of Tea Appeals if he thinks his tea will measure up to the standard. Their decision is final. In the last 3 years there have been only three rejections of tea offered for import.

It is obvious that this system of safeguarding the quality of the tea we drink is effective, and we can be assured that any tea we buy is pure and of standard quality for its type. For information about varieties and price follow the old consumer rule: Read the label.

Water Makes a Difference

Perhaps when you've moved to another part of the country you've been chagrined to note that your tea "tastes funny." You've used your regular measurements and your same tea pot. What then?

CHINA CONGOU, black, fermented.

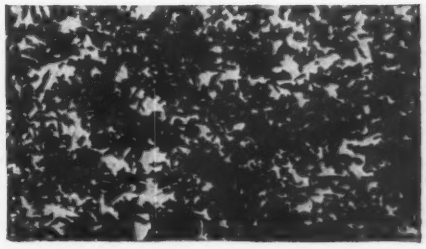


CHINA GUNPOWDER, unfermented.

CANTON OOLONG, semifermented.

ORANGE PEKOE.

YOUNG HYSON, China, green.



FANNINGS, India, black.

Don't worry. You're still the good cook your family says you are, but water makes a difference. We all know that water is "hard" or "soft" and that it varies greatly in its content of iron, calcium, and other minerals. We accept the fact that it takes a little while to get used to the flavor of drinking water in a new place. Naturally, that flavor is apparent in tea and coffee. You may have to change your brand, or measurements, to get a satisfactory taste.

Professional tea tasters test various blends made with water from the regions where it is to be sold. Blends are adjusted to offset the chemical difference in the water. In England, where tea is even more vital than coffee is here, tea blenders are expected to know the chemical constituents of water in every part of England. Kent, for instance, must have a blend to meet the requirements of its chalky water. Connoisseurs often make up their own blends and keep its varieties and proportions "top secret."

If this all sounds too technical and complicated to manage, perhaps an old resident might recommend the blend or brand most acceptable in that locality. Failing that, exacting consumers experiment until they find what they like.

Polly, Put the Kettle on

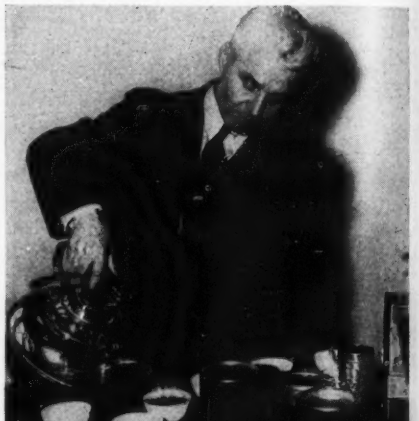
No matter what exotic rare blend of tea you use, no matter how delicate and soft the water, your cup of tea will not be as deliciously satisfying as it should be unless you follow the rules for making it. There's as much difference between good and bad cups of tea as between silk and a sow's ear.

Trade experts, home economists and gourmets agree on certain basic points: A warm earthenware or china teapot, freshly boiling water, infusion for 3 to 5 minutes. "Freshly boiling" means water that has just begun to boil. Longer boiling removes the air from the water and tends to give the tea a flat taste. Opinions differ on the amount of tea per cup. In the Orient such small amounts are used that the tea is little more than colored water to our western palates, while in the back country of Australia they like it so strong and black that it scarcely resembles the beverage we call tea at all. Somewhere between these two lies the average American preference. A pound of tea is said to make anywhere from 150 to 250 cups of average strength tea.

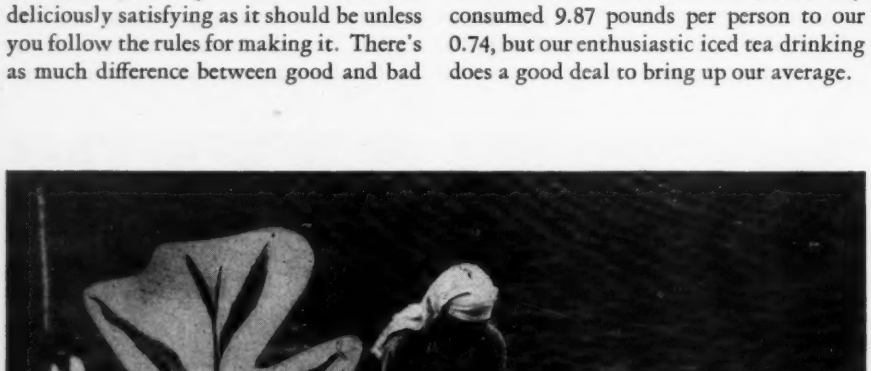
U. S. A. Tea Styles

Tea bags and iced tea are strictly American variants of the tea ritual. Connoisseurs may look down their noses at the tea bag, but housewives have welcomed it as a neat, labor- and tea-saving innovation. The tea trade estimates that 75 percent of all tea sold over grocery counters today is in tea bags. As for iced tea, its almost our national summertime drink. More than 2 billion glasses are drunk each season, says a trade paper. We can't keep up with our British friends who head the world list of tea consumers. Before the war (1939) they consumed 9.87 pounds per person to our 0.74, but our enthusiastic iced tea drinking does a good deal to bring up our average.

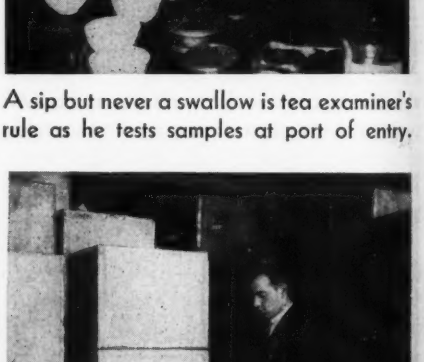
Tea examiner determining the presence of impurities or coloring matter in tea.



A sip but never a swallow is tea examiner's rule as he tests samples at port of entry.



Tea leaves are plucked all year around in frostless regions. Only the tips of the new green shoots are plucked for finest teas. Two lower leaves are of lower quality.



Federal inspector in bonded warehouse taking samples of tea for analysis.

Farm youth on the march

New 4-H membership goal is 3,250,000 members by 1950. Good job being done by Claiborne County, Tenn., in enlisting rural boys and girls in activities designed to make better farmers and better citizens typifies 4-H Club objectives.

●Objective: To give more farm boys and girls the opportunity to share in 4–H Club work and its chances for training to become better farmers and better citizens.

To this end, 4–H leaders have set a goal of 3,250,000 members by 1950. That calls for an enrollment nearly double the 1945 membership of 1,639,000 boys and girls. Hence ways and means to encourage more rural young people to "join up" looms big in the thoughts of the 4–H Club leadership these days.

Essential first step in enrolling more young people in club work obviously is to reach them. Unless they know about 4–H Club activities, many young people will miss an opportunity to share in the learning and doing of the group. Yet because of the limited opportunities which many country communities afford young people for participating in group recreational and educational activities, it is particularly important that neighborhoods and communities be well organized to serve all young people in the country.

Down in Claiborne County, Tenn., the good people are well aware of the importance of a youth program and are working at the job on a community basis.

Split up as it is with hills and dales, Claiborne County presents a real communication and transportation problem as compared to level country that's neatly checkered with paved roads. A less progressive area would probably have been discouraged by the difficulty of reaching all the little farms on the hill tops. Yet ask practically any farmer you might meet in Claiborne County and he would be able to tell you something about the projects on which club members are working—and would very likely have a son or daughter in 4–H Club work either now or in the past.

That the 4–H and other agricultural programs have surmounted formidable physical barriers to reach into the far corners of this hill country is no accident. Citizens of Claiborne County have licked the difficult communication problem by organizing on a community basis. They have set up 25 community organizations so that every family is readily accessible to a community center where neighbors meet at least once a month to consider matters of community interest and to get aid on their farming problems from the county extension agent and agricultural specialists. In this way important farm information is put within the reach of families who live farthest away from the center of the county. Often these are the very families who need the information most of all.

Among the problems which Claiborne County citizens rightly consider of primary importance is that of providing a good environment for its young people. It is not surprising therefore that the drive to enlist more boys and girls into 4–H Club work met with ready support from their parents when the fathers and mothers were told of the objectives at community meetings.

Full cooperation of the schools has also helped in spreading 4–H Club work in Claiborne County. Clubs have been organized in 45 schools throughout the county. Schools are used as the basis of club organization unit, because this system minimizes the transportation difficulty. The children are already in school—brought there by the school bus—so no extra travel time, gasoline or tires is involved in holding the monthly 4–H meeting during the school term. Incidentally teachers have sometimes asked permission to let nonmembers sit in on 4–H meetings on the theory that they would "pick up" some information even if they weren't actively participating. In a number of such instances, the originally indifferent children became interested and asked to join.

With community backing, 4–H Club work has grown rapidly in Claiborne County from about 750 members in 1941 to 2,550 members now.

From Small Beginnings

Importance of small beginnings in 4–H work is one of the ideas being stressed in the drive for larger membership. Local leaders are reminded that the boy with the

baby beef may keep on until he owns a large herd one day. It is therefore highly important to the future of the community as well as the boy's own future that he learn about the selection and care of livestock.

Accomplishments of 4–H clubbers in Claiborne County give eloquent testimony to the wisdom of this idea.

After starting in a small way on 4–H projects with a garden and a few chicks, for instance, Rowena Keck pyramided her earnings for 4–H prize money over a period of 5 years until she has saved enough money to put herself through 3 years of college.

No less impressive is the record of Bill F. Brooks who netted more than $2,000 last year from the sale of 10 beef animals and 16 fat hogs and 1⅞₀ acres of tobacco. Bill is 20 now, which means he'll graduate from 4–H next year.

While these are outstanding examples, many Claiborne County boys and girls have already worked their way up several rungs on the ladder of successful farming enterprize with the backing of their parents and their 4–H Club. Money earned from berry picking or harvesting nuts has in some cases served as a starter. Again, an enterprising boy or girl begins by raising a small lot of brooder chicks. These first chicks are often obtained through a loan, the young borrower agreeing to take good care of the chicks, and to save the pullets but to turn back an equal number of the cockerels to be sold. Proceeds from the cockerel sales are used to give another child the opportunity to raise baby chicks. Profits from an initial venture in raising baby chicks may lead on to hog raising and the fattening of beef animals.

While the immediate dollars and cents returns from such farming projects are often considerable, other gains should not be overlooked. Many times the lessons learned by a boy and girl growing a crop or raising chicks or livestock under supervision of the extension club agent have convinced a skeptical parent that there's something in the "new-fangled" farming practices after all.

Traditionally hill people want to be shown before they take up new ways and the farmers of Claiborne County are no exception. But once they are shown the advantages of scientific farming methods they are quick to adopt them. They are not to be deterred by the extra work or trouble sometimes involved in the initial change-over, either.

A soil survey map shows that the land generally is deeply eroded, possesses little organic matter and is low in plant nutrients. In addition, it is so hilly as to call for specially adapted farming methods in order to make a good crop and to halt the wasting away of the soil.

Yet despite these unfavorable factors Claiborne County farmers have built up the productivity of their farms. Land that used to produce 900 pounds of tobacco now yields 1,675 pounds of burley tobacco—which has recently netted them the world's record dollar return per acre.

Ten years ago it took an acre of pasture land in Claiborne County to pasture one head of livestock. Today an acre of land is capable of supporting five head of livestock.

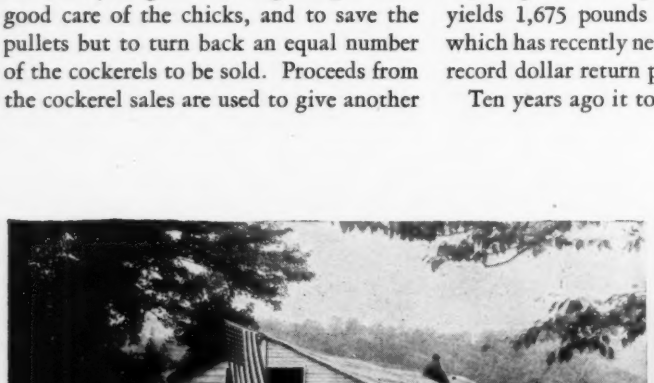
Yes, the conservative farmers of Claiborne County are practically a hundred percent sold on "new fangled" scientific farming methods preached by their extension agent—because they've been shown. Many were skeptical at first, when a few demonstration farmers in the county were furnished lime and phosphate from TVA under an agreement to adopt certain improved farming practices.

There was even some feeling that the Government might take over, that by consenting to accept the fertilizer the demonstration farmers might trade away their dearly loved freedom or might even end by losing their farms to Uncle Sam.

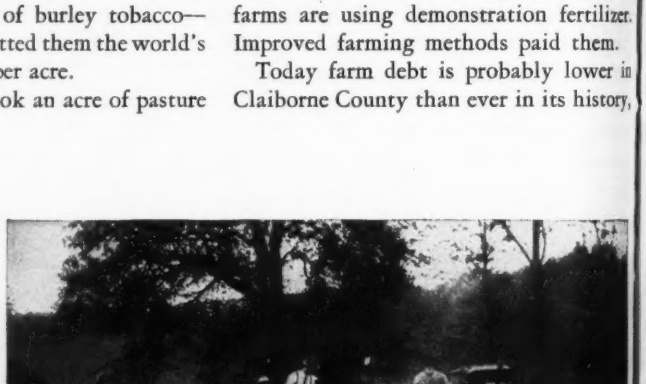
So the whole community watched. They watched and they were impressed, for the farmers who received the fertilizer and the guidance made better crops and larger profits.

Soon more farmers were applying for demonstration fertilizer and agreeing to abide by farm plans which called for more pasture, for rotation of crops, contour planting, the planting of winter cover crops and other measures calculated to build the soil. Back in 1935, only 123 farms used demonstration fertilizer. Now about 2,100 of the county's some 3,000 farms are using demonstration fertilizer. Improved farming methods paid them.

Today farm debt is probably lower in Claiborne County than ever in its history,

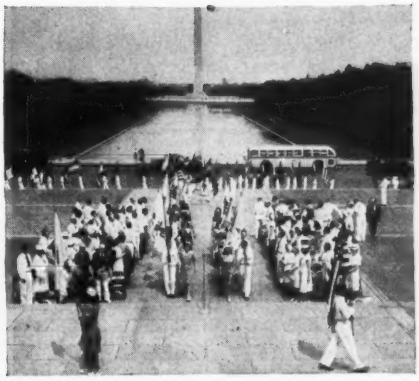


Young people are welcome at the Raven's Ridge, Tenn., community club which all hands built from an old CCC camp house.



To eat better and save money, Claiborne County, Tenn., farmers produce most of their own food. Here they're making sorghum

In one year, 4–H members produced enough food to feed 3,000,000 soldiers.



Ceremonies at the National 4–H camp last June in Washington stressed citizenship.

4–H girls learn to sew, cook, raise food. This dress won Rowena Keck (left) a prize.

many farmers for the first time owning their farms free of mortgage.

In many cases the boys and girls of the family have been first to learn of new and improved farming practices through their 4-H work and have in turn convinced their parents that the scientific methods are worth trying. Sometimes the children actually initiate the change themselves through their projects. Thus the boy who successfully raises a thoroughbred pig and makes good money on it is likely to convince the father that it pays to go in for better livestock. Also many farm homes now boast better laying poultry flocks because a boy or girl participated in a poultry raising project.

More Local Leadership

Development of more and stronger local leaders is another important step toward extending 4–H work is the opinion of State and Federal leaders. That fits right into the Claiborne County pattern. People down there like to do things themselves and the agricultural workers in the county have been wise to recognize this fact and build upon it. That way the farmers feel the program is their own. Through their community organizations the farmers decide what are the most pressing problems they face and enlist the aid of the county agents in helping meet these problems successfully.

When the Raven's Ridge community organization was first set up back in 1937, for instance, farmers felt that their crying need was a good road, as they were cut off from their markets by "sorry" transportation facilities. They got the road by going to the road commissioner as a community group and demanding it, Now they are about to get electricity through their own cooperative organization. Farmers in the Raven's Ridge community will tell you that their farms now yield half or two-thirds again as much as they did a decade ago when they got together to work out their problems through their own leadership and making use of the services available to them from the Government. Last year Raven's Ridge received recognition of its accomplishments by winning a prize in the East Tennessee Rural Community Improvement contest sponsored by Knoxville civic organizations.

Four–H Club activities in Claiborne County stress the importance of good citizenship and community service. It is not surprising, therefore, that increasing numbers of the older boys and girls are beginning to accept places of leadership in their communities.

One former 4–H Club member, for instance, has "graduated" to teach a farm training course to returned veterans. Many others are active in their community organizations, a number holding office.

Claiborne young people aren't afraid to "speak up in meetings" to express their views as to what course of action is best for their farm community. At their club sessions they've learned about parliamentary procedures and to think on their feet.

Boys and girls put on their own fair. It was a big success, drawing over 747 entries and an audience that ran into the thousands. What's more many prize winners from the county fair went on to the district fair in Knoxville and won ribbons there.

A large number of the 160 boys and girls who attended the 4–H Club camp at Lincoln Memorial University paid their own way through their earnings. The girls gave a style show to display their sewing ability, and learned new housekeeping methods in the university home economics laboratories, while the boys participated in demonstrations on the college's experimental farms.

Besides putting on their own programs, Claiborne 4–H boys and girls often assist at the community meetings. Thus a number of clubs have worked up demonstrations in nutrition and good table manners. After the demonstrations are given at a club meeting, these are presented before their community meeting while their proud parents watch. One such demonstration won for its exhibitor, Eula Jeane Gray, a first prize at the District Fair.

Very rightly the grown-ups of Claiborne County are proud of the accomplishments of their young people. Many of the individual and community projects which 4–H Club boys and girls undertake are necessarily small. But the sum of their activities is far from small.

Take the young people of Ritchie community, a neighborhood of 51 small farms, for example. There the older 4–H Club girls are helping make their school lunch program a success by spending a study period cooking for the midday meal at school. Last year the community's 42 4–H Club members fed about 15 baby beeves and fattened 28 hogs, besides raising gardens, and growing tobacco, canning and sewing in a big way. Claiborne County has about 2,500 4–H members, so the sum of their production efforts is correspondingly larger. Adding up the production record of all the 4–H Club boys and girls in America, the sum total is really impressive. Last year they produced enough food to feed a million soldiers for three years.

All in all, 4–H Club boys and girls are doing a big job in their communities. But next year, and the next, they plan to recruit new members and do a bigger job.

Plowing ahead . . .

● We American consumers are the best fed people in the world. Despite shortages of fats, oils, and sugar we are consuming more food per capita than we did 5 years ago. Even throughout the war when one-fifth of our food went to the military and allies, civilians ate more than they did a few years prior to the war. All of this is possible because of the production of our farmers. This year is the banner year of all. Our harvest is the largest our country has ever produced. Our production is 6 percent over 1942 which, up to this time, was the record year. And it is 34 percent above the 1923–32 average.

The amazing increase in production during the war years forecasts future years of continuing increasing production, for our farmers cannot turn back. For increased yields are no flash in the pan. They cannot be accounted for by good weather alone. Oftentimes a phenomenally good year of weather will boost production or a poor year, like the drought of 1934, will lower it drastically. But the better than average weather during the war was only a rather small part of the causes for the bulge in farm production. Although the weather factors affecting the production in 1942–44 were only 10 to 15 percent more favorable than longer time expectancy, it accounted for more than one-fourth of the total increase in production. The real factors were in the nature of changes in farming that amounted to a revolution.

The factors which brought the wartime bumper yields were many. They were factors that had been having their effect through the decade prior to the war. Greater mechanization was a prime cause but by no means the only one. The increased use of lime and fertilizer, cover crops, contour plowing, and other soil conservation practices played their part. Livestock breeds have improved through the years and better feeding practices were put into effect.

Science found new insecticides and weed killers along with economical means of applying them. Then too there was the development of better seeds. These all worked together to effect the wartime production which we had and established the high and rising level of our capacity to produce. How this worked is described in the book "Changes in Farming In War and Peace" published by the Bureau of Agricultural Economics.

It says: "The joint effects of these technological improvements on the volume of production may be illustrated by comparing them with the effects of the flow of water in its several tributaries on the water level of a large river. If water rises to flood stage in one of the tributaries this will of course increase the water level in the main stream, but if the tributary is small the effect may be scarcely noticeable when its flood reaches the main channel. Similarly, the effect of single improvements in farm production, that are im-

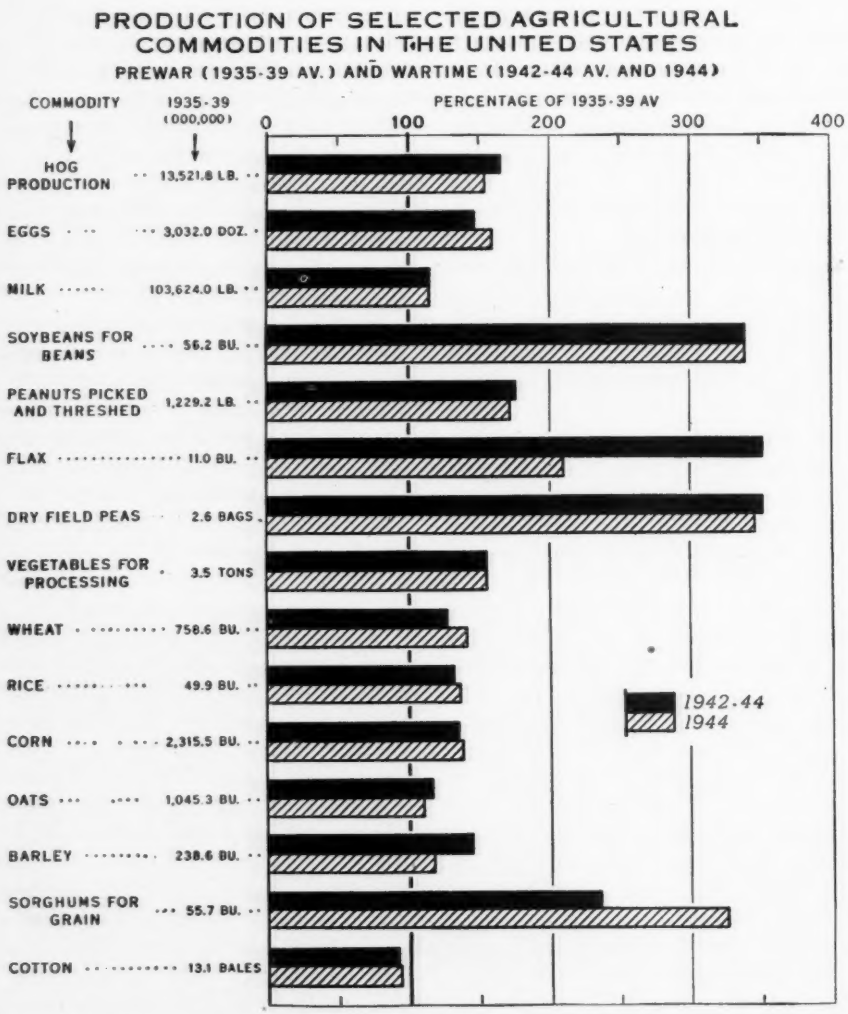


Figure 1.—Production of nearly all the principal agricultural commodities increased in the war years. The sharp advances in hog production and in oil crops reflect responses to the acute need for fats and oils. The phenomenal increase indicated for dry field peas is of less over-all importance than some of the smaller percentage increases registered from a larger prewar base such as those for eggs and milk.

portant by themselves, are scarcely perceptible in their effect on total production. But if all the tributaries of a large river reach flood stage at the same time, the water in the main channel also will rise to flood stage, and the change in the water level does not escape notice. In a sense this is the effect that adoption of the accumulation of technological improvements had on farm production in the years of World War II.

"But one might make the comparison somewhat differently, and more correctly, by saying that the production-increasing potentialities of improvements that were made over a decade, and that normally would have been diverted gradually into the production stream, were held back by the drought and depression of the 1930's. It was the breaking of these restraints that caused the flood of production in the war years—in the same way that a simultaneous breaking of dams on several tributaries will cause a river to reach flood stage from water that was accumulated from a normal flow of the source."

"This accumulation of potential increases in production had escaped notice. The increase that was achieved was therefore much larger than could have been forecast from past trends. It was much greater than the increase that took place in World War I, because there was no similar accumulation of potential improvements at that time. Perhaps none familiar with the South would have been so rash as to forecast, in the fall of 1941, that the acreage of peanuts picked and threshed would be nearly doubled in 1942, and that production for the years 1942–44 would average 176 percent of 1935–39."

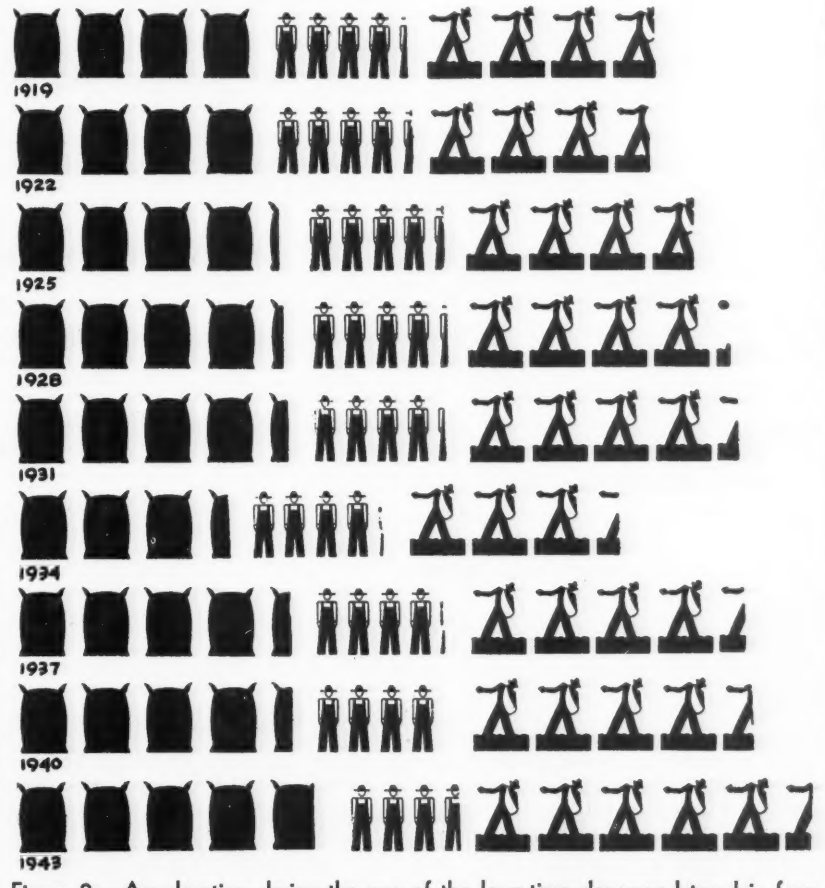


Figure 2.—Acceleration during the war of the long-time downward trend in farm employment, coupled with marked wartime increases in farm production, resulted in record levels of production per farm worker.
One symbol equals 24 percent.

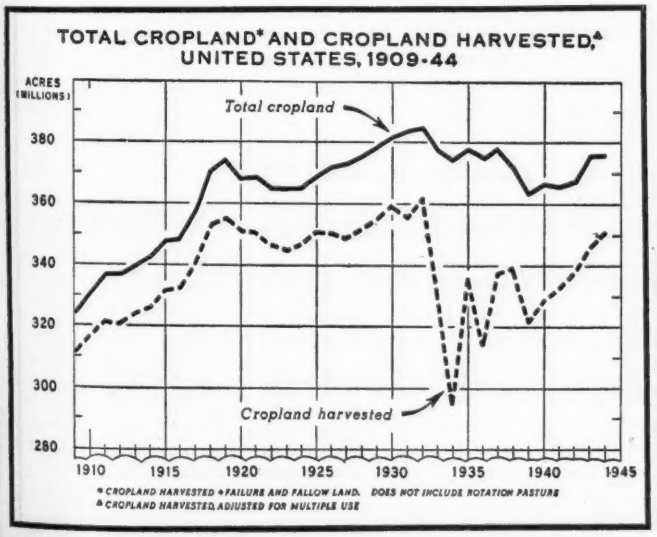
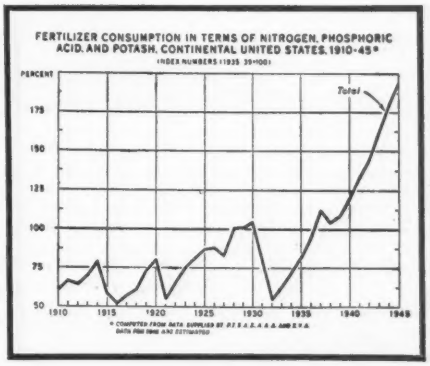


Figure 3.—Total cropland acreage increased substantially in the decade preceding World War I, and moderately in the first postwar decade. During World War II cropland acreage was approximately the same as in World War I.

Figure 4.—Use of nitrogen, phosphoric acid, and potash as fertilizer during World War II reached a level nearly double that of the 1935–39 average. The highest consumption before 1937 occurred in 1930, when the level reached was 5 percent above the average of the years 1935–39.



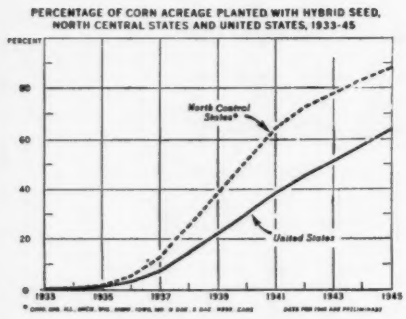
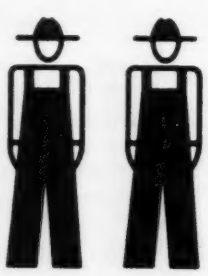


Figure 5.—From the merest beginnings in 1933, hybrid seed had replaced open-pollinated varieties on about 64 percent of the total acreage planted in 1945. The increase has been most rapid in the North Central States, where it was used for planting 88 percent of the acreage in 1945. Hybrid corn yields an average 20 percent more per acre than the open-pollinated varieties.



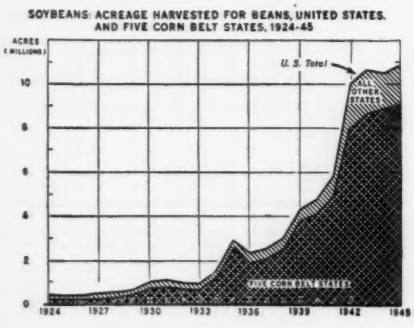


Figure 6.—The acreage of soybeans harvested for beans in the United States increased gradually from less than a half-million acres in 1924 to about a million acres in the early 1930's and then rose sharply. The wartime level exceeded 10 million acres.

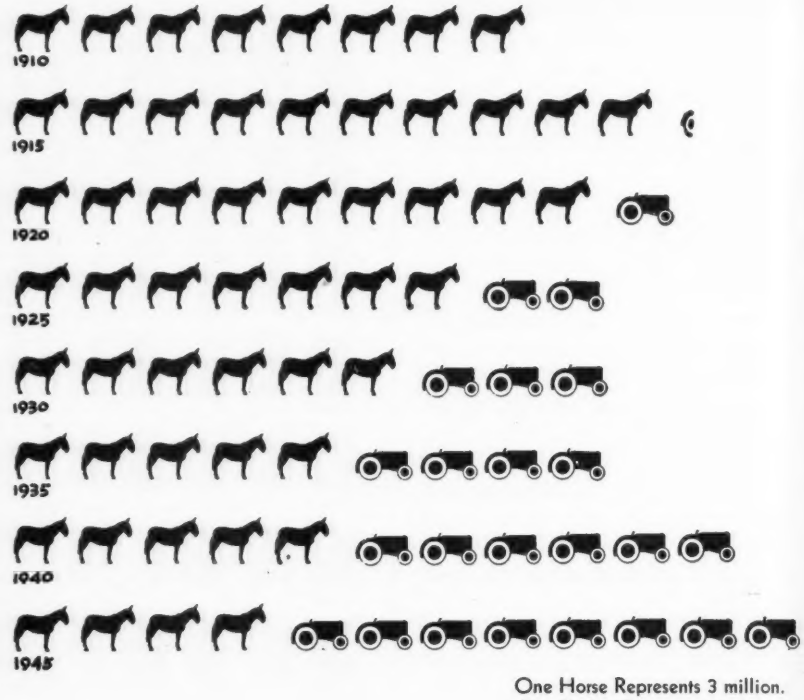


Figure 7.—Tractors have rapidly been replacing animal power for farm production. The number of tractors on farms increased sharply during World War I and in the 1920's. This trend was interrupted in the drought and depression years 1931–35 but was resumed in the late 1930's and early 1940's. The number on farms January 1, 1945, was 2,072,000.

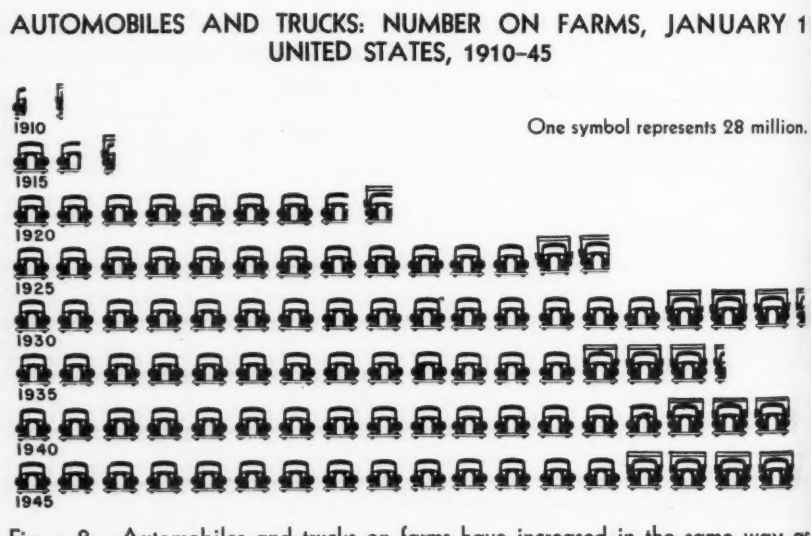
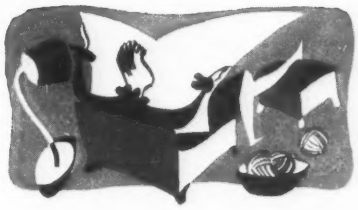


Figure 8.—Automobiles and trucks on farms have increased in the same way as tractors, except for the depression years and during World War II.

Close up on the News . . .



No More Mandatory Meat Grading

Missing from much of the meat now being sold over the counter will be the purple Federal grade stamp that has become so familiar to consumers during the last few years.

Reason for its absence is that Federal grading is not compulsory since OPA ceilings on meat were removed on October 15. However, Federal grading service is still available to packers and slaughterers on an optional basis.

During the war, between 90 and 95 percent of all the meat sold in the United States was Federally graded. It was stamped Choice, Good, Commercial, or Utility as judged by an impartial official grader.

The extent to which Federal grading will be continued now depends largely on consumer demand for meat with the Federal stamp. Packers who wish to continue with the service may do so by applying to the Standardization and Grading Division of the Livestock Branch, Production and Marketing Administration.

National School Lunch Officials Meet

State and Federal officials responsible for the operation of the National School Lunch Program in each State met in Washington October 22 and 23. Discussions centered around the relation of adequate school lunches to future national health and scholastic progress. In a message from President Truman read at the opening of the meeting, he said: "Nothing is more important in our national life than the welfare of our children, and proper nourishment comes first in attaining this welfare. The well-nourished school child is a better student. He is healthier and more alert. He is developing good food habits which will benefit him for the rest of his life. In short, he is a better asset for his country in every way."

In view of recent advances in food prices the State representatives pointed out that present funds would not be able to continue School Lunch Program operations on present levels. It was repeatedly pointed out that funds available for the current year would only be sufficient for about 8 million boys and girls, who are attending more than 46 thousand public and nonprofit private schools, of the 23 to 24 million school children in the United States.

Greeks Learn Community Canning

Community canning centers are being set up in Greece similar to those in this country

which have preserved so many million quarts of home-grown produce during the past 5 years.

Thirty-one of these canning units were supplied by UNRRA and sold to the Greek agricultural cooperatives who will operate them in areas where local fresh produce has been going to waste through lack of transportation and preserving facilities. An UNRRA food processing expert, in practical demonstrations, taught 34 representatives of the Greek Ministry of Agriculture and of agriculture cooperatives from all parts of Southern Greece how to make the best use of the new units. These people in turn will act as demonstrating agents to teach the members of the communities to preserve their direly needed food.

In addition to learning the operation of the canning units, the 34 Greek demonstration agents have also been given courses in the most recent and practical methods in home economics.

Plentiful Foods for December

In the month of December a number of fruits and vegetables and nuts are expected to be in relatively plentiful supply throughout the greater part of the country.

There are plenty of potatoes. We harvested the largest crop in our history, and they are cheaper than most foods.

There are also plenty of onions. Production is estimated to be more than double that of last year in the eastern areas, 55 percent larger in the Midwest, and 22 percent larger in the West. Prices have been extremely low. Weather conditions were favorable for growing and harvesting in nearly all the producing areas of the country, and the quality of the longer keeping varieties in the East and Midwest is exceptionally good.

The consumer's tomato market, with continuing good weather, will be amply supplied this month. In December tomatoes principally come from acreages in Texas and Florida. Imports also begin to arrive at that time from Mexico, Cuba, and Bahama Islands.

The 1946–47 citrus fruit crop looks like the largest on record. There is an adequate supply of apples available in all sections of the country. Cranberries, dried peaches, almonds, and filberts will also be in plentiful supply.

GUIDE POSTS

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Mountain-Top Baking

Do your baking recipes fit their environment? Or do your cakes and cookies suffer from maladjustment? A collection of what might be called "acclimated recipes" has recently been issued by the Colorado State Experiment Station. These tested recipes include corrections for their use at certain altitudes. The important features of altitude cookery are given in technical terms, but less technical information for home use is also included.

In the words of the Experiment Station Record, "The leavening correction, applying usually to baking powder or soda, is accomplished by decreasing its content when the sugar-flour ratio in the recipe remains unchanged. As the altitude at which the cake is to be baked increases, the water content should be increased, generally accomplished by providing an increase in the milk or egg content. The sugar-water ratio is related to the kind of shortening used—hydrogenated shortening, lard, or butter. Hydrogenated shortenings are divided into two types—the ordinary and the high-water-tolerant; the latter gives a more effective distribution of water and a smaller amount is required. When natural shortenings are used, most of the water-furnishing ingredients should be mixed into the batter a little at a time to prevent severe curdling. At a 10,000-foot elevation, the internal temperature attained within a baking cake will be at least 18° F. lower than at sea level due to lowered boiling points, making the structural strength of the flour and eggs much less. Egg added as a form of liquid would provide additional strength to counteract the tenderizing effect of altitude. Suggestions for measurements, equipment, and general baking and mixing methods are discussed."

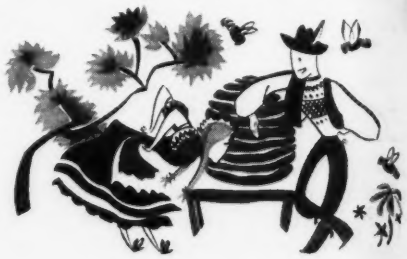
New Suits for Fruits and Vegetables

Housewives, it seems, prefer their fruits and vegetables manicured and curled and all dressed up in nice new cellophane suits. That way, say the housewives, fresh produce is more sanitary, easier to select, handier to carry home, simpler to store, and far, far easier to prepare. Also the whole proposition is easier on the garbage pail because there's so very little waste. The survey, which has been in progress since early 1945, was made in Columbus, Ohio, by the Department of Rural Economics and Rural Sociology of the Ohio Agricultural Experiment Station in collaboration with super markets and various manufacturers of containers, cellophane, and refrigeration equipment. Prof. Charles Hauck reports on the experiment in the Bimonthly Bulletin of the Ohio Station. Retail price of the packaged items was not advanced over that of identical items sold in bulk. Savings were made at various stages, by extension of the "Shelf Life" of the perishable foods, and by increased volume of sales.

"City of Homes" Makes Homemakers

No excuse for ignorance about homemaking in Philadelphia. The public schools, through the Division of Home Economics and School Extension, have three programs for training homemakers: A public adult evening school; a household occupations school; and a visiting homemaking consultant service. Most popular subjects of a varied curriculum are dressmaking, millinery, and foods. Courses in home nursing, first aid and many homemaking subjects are offered in the evening school. The household occupations program is primarily for the benefit of out-of-school youth. Arrangements are made for the students to work for a period of 3 weeks in a nursery school, acquiring actual experience in the care of young children. The visiting homemaking consultant service conducts group meetings in individual homes and some of the elementary schools arrange classes for groups of mothers under the leadership of a home economics teacher.

All in all, there's a place for everyone in homemaking courses in William Penn's City.



Sweetening the Balkans

Over 40,000 beehives with comb foundation and wire are being sent to Balkan countries through UNRRA, to help the farmers in those countries revive the culture of bees. Farm families and their customers in town and cities have always depended on honey for a main source of sweetening. Consequently wartime destruction of beehives was keenly felt. By adapting modern apiary methods to their own bee culture, Balkan farmers hope to bring honey production back to preoccupation quantities.

LISTEN TO CONSUMER TIME

Every Saturday—Coast to Coast
over N. B. C. 12:15 a. m. EST
11:15 a. m. CST
10:15 a. m. MST
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